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ED Entered STN: 20 Jul 1990

CN 1-Pentanethiol, 5-[(tetrahydro-2H-pyran-2-yl)oxy]- (CA INDEX NAME) MF C10 H20 O2 S SR CA LC STN Files: CA, CAPLUS, TOXCENTER

0- (CH₂) 5- SH

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE) 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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FILE 'REGISTRY' ENTERED AT 09:41:59 ON 16 FEB 2010 L1 STRUCTURE UPLOADED L2 0 S L1 FAM SAM L3 1 S L1 FAM FULL L4 0 F HCAPLUS

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34.9% PROCESSED 2000 ITERATIONS

3 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED) SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:ONLINE **COMPLETE**
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PROJECTED ANSWERS:3 TO 346

L6 3 SEA SSS SAM L1

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L7 6 L6

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| L7 ANSWER 1 OF 6 ACCESSION NUMBER: DOCUMENT NUMBER: | HCAPLUS COPYRIGHT 2010 ACS on STN 2006:1302753 HCAPLUS 146:184665 | | |
|---|---|--|--|
| TITLE: | Preparation and use of microarrays containing synthetic heparin oligosaccharides for the rapid analysis of heparin-protein interactions | | |
| AUTHOR(S): | Noti, Christian; de Paz, Jose L.; Polito, Laura; Seeberger, Peter H. | | |
| CORPORATE SOURCE: | Laboratory for Organic Chemistry, Swiss Federal | | |

| | Institute of Technology (ETH) Zurich, Zurich, 8093, |
|------------------------|---|
| | Switz. |
| SOURCE: | ChemistryA European Journal (2006), 12(34), |
| | 8664-8686 |
| | CODEN: CEUJED; ISSN: 0947-6539 |
| PUBLISHER: | Wiley-VCH Verlag GmbH & Co. KGaA |
| DOCUMENT TYPE: | Journal |
| LANGUAGE: | English |
| OTHER SOURCE(S): | CASREACT 146:184665 |
| AB Heparin is a highly | sulfated, linear polymer that participates in a |
| plethora of biol. pr | rocesses by interaction with many proteins. The chemica |

al complexity and heterogeneity of this polysaccharide can explain the fact that, despite its widespread medical use as an anticoagulant drug, the structure-function relationship of defined heparin sequences is still poorly understood. Here, we present the chemical synthesis of a library containing heparin oligosaccharides ranging from di- to hexamers of different sequences and sulfation patterns. An amine-terminated linker was placed at the reducing end of the synthetic structures to allow for immobilization onto N-hydroxysuccinimide activated glass slides and creation of heparin microarrays. Key features of this modular synthesis, such as the influence of the amine linker on the glycosylation efficiency, the use of 2-azido-glucose as glycosylating agents for oligosaccharide assembly, and the compatibility of the protecting group strategy with the sulfation-deprotection steps, are discussed. Heparin microarrays containing this oligosaccharide library were constructed using a robotic printer and employed to characterize the carbohydrate binding affinities of three heparin-binding growth factors. FGF-1, FGF-2 and FGF-4 that are implicated in angiogenesis, cell growth and differentiation were studied. These heparin chips aided in the discovery of novel, sulfated sequences that bind FGF, and in the determination of the structural requirements needed

for

recognition by using picomoles of protein on a single slide. The results presented here highlight the potential of combining oligosaccharide synthesis and carbohydrate microarray technol. to establish a structure-activity relationship in biol. processes.

IT 920957-88-6P

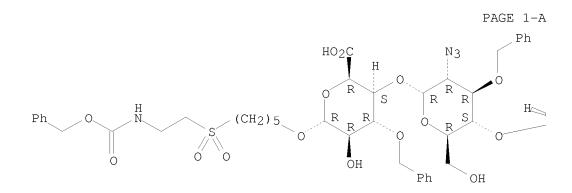
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and use of microarrays containing synthetic heparin oligosaccharides for rapid anal. of heparin-protein interactions)

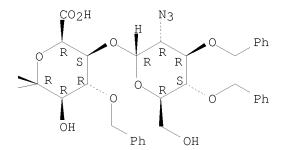
RN 920957-88-6 HCAPLUS

CN α-L-Idopyranosiduronic acid, 5-[[2-[[(phenylmethoxy)carbonyl]amino]ethyl]sulfonyl]pentyl 0-2-azido-2-deoxy-3,4-bis-0-(phenylmethyl)-α-D-glucopyranosyl-(1→4)-0-3-0-(phenylmethyl)-α-L-idopyranuronosyl-(1→4)-0-2-azido-2-deoxy-3-0-(phenylmethyl)-α-D-glucopyranosyl-(1→4)-3-0-(phenylmethyl)- (CA INDEX NAME)

Absolute stereochemistry.



PAGE 1-B



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RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

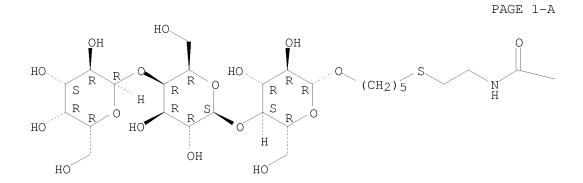
| L7 ANSWER 2 OF 6 HC | CAPLUS COPYRIGHT 2010 ACS on STN |
|----------------------|--|
| ACCESSION NUMBER: | 2006:611019 HCAPLUS |
| DOCUMENT NUMBER: | 145:242922 |
| TITLE: | Structural analysis of the interaction between shiga |
| | toxin B subunits and linear polymers bearing clustered |
| | globotriose residues |
| AUTHOR(S): | Watanabe, Miho; Igai, Katsura; Matsuoka, Koji; |
| | Miyagawa, Atsushi; Watanabe, Toshiyuki; Yanoshita, |
| | Ryohei; Samejima, Yuji; Terunuma, Daiyo; Natori, |
| | Yasuhiro; Nishikawa, Kiyotaka |
| CORPORATE SOURCE: | Department of Clinical Pharmacology, Research |
| | Institute, International Medical Center of Japan, |
| | 1–21–1 Toyama, Shinjuku-ku, Tokyo, 162–8655, Japan |
| SOURCE: | Infection and Immunity (2006), 74(3), 1984-1988 |
| | CODEN: INFIBR; ISSN: 0019-9567 |
| PUBLISHER: | American Society for Microbiology |
| DOCUMENT TYPE: | Journal |
| LANGUAGE: | English |
| AB We previously dev | veloped linear polymers bearing clustered trisaccharides |
| | |

we previously developed linear polymers bearing clustered trisaccharides of globotriaosylceramide (Gb3) as orally applicable Shiga toxin (Stx) neutralizers. Here, using a Gb3 polymer with a short spacer tethering the trisaccharide to the core, we found that shortening the spacer length markedly reduced the binding affinity for Stx2 but not Stx1. Moreover, mutational anal. revealed that the essential binding sites of the terminal trisaccharides were completely different between Stx1 and Stx2. These

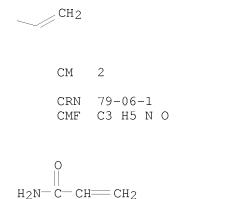
results provide the mol. basis for the interaction between Stx B subunits and Gb3 polymers. 749924-89-8 IΤ RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study) (structural anal. of interaction between shiga toxin B subunits and linear polymers bearing clustered globotriose residues) 749924-89-8 HCAPLUS RN 2-Propenamide, N-[2-[[5-[($0-\alpha-D-galactopyranosyl-(1\rightarrow 4)-O-$ CN β -D-galactopyranosyl-(1 \rightarrow 4)- β -Dglucopyranosyl)oxy]pentyl]thio]ethyl]-, polymer with 2-propenamide (9CI) (CA INDEX NAME) СМ 1

CRN 749924-87-6 CMF C28 H49 N O17 S

Absolute stereochemistry.

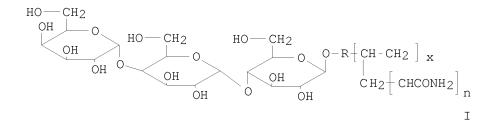


PAGE 1-B



OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS) REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

| L7 ANSWER 3 OF 6 HCAE ACCESSION NUMBER: DOCUMENT NUMBER: | 2005:1 | 129098 HCAE | | |
|--|--|---------------------------|----------------------------------|----------------|
| TITLE: | | charide deri er agents | vatives as colon baci | llus verotoxin |
| INVENTOR(S): | Matsuoka, Hiroshi; Terunuma, Hiroaki; Hatano, Takeshi; Nishikawa, Kiyotaka; Natori, Yasuhiro; Kita, Eiji; Watanabe, Miho | | | |
| PATENT ASSIGNEE(S): | Japan Prefec | | Technology Agency, Ja | pan; Nara |
| SOURCE: | - | Kokai Tokkyo JKXXAF | Koho, 18 pp. | |
| DOCUMENT TYPE: | Patent | | | |
| LANGUAGE: | Japane | ese | | |
| FAMILY ACC. NUM. COUNT: PATENT INFORMATION: | 1 | | | |
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| JP 2005289907 PRIORITY APPLN. INFO.: GI | A | 20051020 | JP 2004-108483 JP 2004-108483 | |

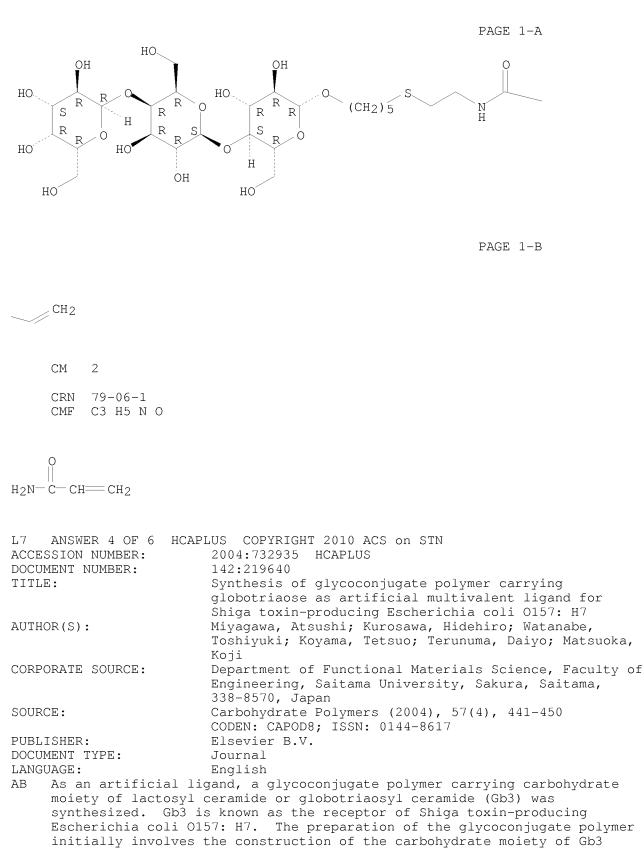


- AB Trisaccharide derivs. (I; X, N = 0-integer number; R = (heteroatom-mediated)hydrocarbon chain), with mol. weight 30,000-200,000, are claimed as counter agents for verotoxins STX1 and STX2 from colon bacillus 0157:H7. I were prepared, and their inhibiting effects on adhesion between verotoxin and intestine were tested.
- IT 749924-89-8P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
 (Uses)
 (trisaccharide derivs. as colon bacillus verotoxin counter agents)
- (trisaccharide derivs. as colon bacillus verotoxin counter agents) RN 749924-89-8 HCAPLUS
- CN 2-Propenamide, N-[2-[[5-[($0-\alpha-D-galactopyranosyl-(1\rightarrow 4)-0-\beta-D-galactopyranosyl-(1\rightarrow 4)-\beta-D-galactopyranosyl)oxy]pentyl]thio]ethyl]-, polymer with 2-propenamide (9CI) (CA INDEX NAME)$

CM 1

CRN 749924-87-6 CMF C28 H49 N O17 S

Absolute stereochemistry.



derivative which has n-pentenyl group as polymerizable group. In addition, the

n-pentenyl group of the Gb3 derivative was modified and different polymerizable groups such as acrylamide group were introduced at ∞ -position of the aglycon. Radical polymerization of the synthesized glycosyl monomers with or without acrylamide proceeded smoothly in water using ammonium persulfate and N, N, N', N'-tetramethylethylenediamine as usual initiator system and gave water-soluble glycoconjugate polymers having various polymer compns. These polymers have the potential to neutralize Shiga toxin by reason of cluster effect and multivalency.

- IT 749924-89-8P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (synthesis of glycoconjugate polymer carrying globotriaose as
 artificial multivalent ligand for Shiga toxin-producing Escherichia
 coli)
- RN 749924-89-8 HCAPLUS
- CN 2-Propenamide, N-[2-[[5-[($0-\alpha-D$ -galactopyranosyl-($1\rightarrow4$)-O- β -D-galactopyranosyl-($1\rightarrow4$)- β -Dglucopyranosyl)oxy]pentyl]thio]ethyl]-, polymer with 2-propenamide (9CI) (CA INDEX NAME)

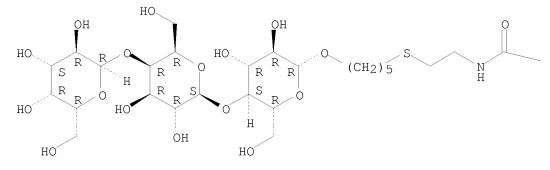
CM 1

CRN 749924-87-6

CMF C28 H49 N O17 S

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

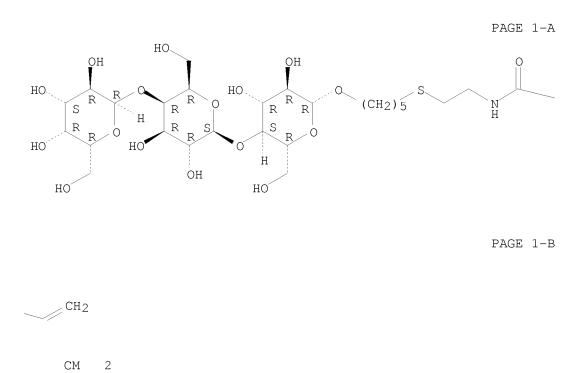


CM 2

CRN 79-06-1 CMF C3 H5 N O

 $\overset{O}{\overset{||}{_{_{_{_{_{}}}}}}}_{H_2N-C-CH} CH_2$

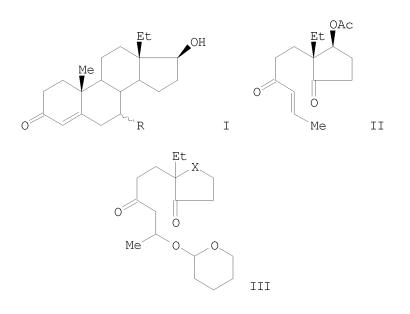
| OS.CITING REF COUNT: | 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS) | | | |
|--|--|--|--|--|
| REFERENCE COUNT: | THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT | | | |
| L7 ANSWER 5 OF 6 HCAP ACCESSION NUMBER: DOCUMENT NUMBER: TITLE: | LUS COPYRIGHT 2010 ACS on STN 2004:190370 HCAPLUS 141:235701 Oral therapeutic agents with highly clustered globotriose for treatment of Shiga toxigenic | | | |
| AUTHOR(S): | Escherichia coli infections Watanabe, Miho; Matsuoka, Koji; Kita, Eiji; Igai, Katsura; Higashi, Nobutaka; Miyagawa, Atsushi; Watanabe, Toshiyuki; Yanoshita, Ryohei; Samejima, Yuji; Terunuma, Daiyo; Natori, Yasuhiro; Nishikawa, | | | |
| CORPORATE SOURCE: | Kiyotaka Department of Clinical Pharmacology, Research Institute, International Medical Center of Japan, and Bioresources Research Laboratory, The Institute of Medical Chemistry, Hoshi University, Tokyo, Japan | | | |
| SOURCE: | Journal of Infectious Diseases (2004), 189(3), 360-368 CODEN: JIDIAQ; ISSN: 0022-1899 | | | |
| PUBLISHER: DOCUMENT TYPE: LANGUAGE: AB Shiga toxin (Stx) i | University of Chicago Press Journal English | | | |
| AB Shiga toxin (Stx) is a major virulence factor in infection with Stx-producing Escherichia coli (STEC). We developed a series of linear polymers of acrylamide, each with a different d. of trisaccharide of globotriaosylceramide (Gb3), which is a receptor for Stx, and identified Gb3 polymers with highly clustered trisaccharides as Stx adsorbents functioning in the gut. The Gb3 polymers specifically bound to both Stx1 and Stx2 with high affinity and markedly inhibited the cytotoxic activities of these toxins. Oral administration of the Gb3 polymers protected mice after administration of a fatal dose of E. coli O157:H7, even when the polymers were administered after the infection had been established. In these mice, the serum level of Stx was markedly reduced and fatal brain damage was substantially suppressed, which suggests that the Gb3 polymers entrap Stx in the gut and prevent its entrance into the circulation. These results indicate that the Gb3 polymers can be used as oral therapeutic agents that function in the gut against STEC infections. | | | | |
| <pre>IT 749924-89-8 RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (Gb3 polymers effectively inhibited cytotoxicity of Stx1 and Stx2 wit lesser extent in Vero cells) RN 749924-89-8 HCAPLUS</pre> | | | | |
| CN 2-Propenamide, N-[2 β -D-galactopyranosy | -[[5-[($0-\alpha-D-galactopyranosyl-(1\rightarrow 4)-O-$ | | | |
| CM 1 | | | | |
| CRN 749924-87-6 CMF C28 H49 N 017 | S | | | |
| Absolute stereochemistry | | | | |



CRN 79-06-1 CMF C3 H5 N O

0 || н2N-С-СН=СН2

| OS.CITING REF COUNT: | 40 THERE ARE 40 CAPLUS RECORDS THAT CITE THIS RECORD (40 CITINGS) | | |
|-------------------------|--|--|--|
| REFERENCE COUNT: | 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT | | |
| L7 ANSWER 6 OF 6 HCAP | LUS COPYRIGHT 2010 ACS on STN | | |
| ACCESSION NUMBER: | 1986:168671 HCAPLUS | | |
| DOCUMENT NUMBER: | 104:168671 | | |
| ORIGINAL REFERENCE NO.: | 104:26731a,26734a | | |
| TITLE: | Total synthesis of optically active $7lpha, 18-$ and | | |
| | 7β , 18-dimethyl-19-nortestosterone | | |
| AUTHOR(S): | Zhuang, Zhi Ping; Zhou, Wei Shan | | |
| CORPORATE SOURCE: | Shanghai Inst. Org. Chem., Acad. Sin., Shanghai, Peop. | | |
| | Rep. China | | |
| SOURCE: | Tetrahedron (1985), 41(18), 3633-41 | | |
| | CODEN: TETRAB; ISSN: 0040-4020 | | |
| DOCUMENT TYPE: | Journal | | |
| LANGUAGE: | English | | |
| OTHER SOURCE(S): | CASREACT 104:168671 | | |
| GI | | | |



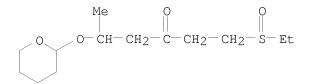
AB Title compds. I (R = α -Me, β -Me) were prepared from the new common optically active synthon II, which was obtained from acrolein in 12 steps. A key step in the preparation of II was the stereoselective reduction of

the cyclopentanedione III (X = CO) by Saccharomyces cerevisiae to give III (X = $\beta\text{-CHOH}$).

IT 101387-21-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
 (preparation and substitution reaction of, with ethylcyclopentanedione)

RN 101387-21-7 HCAPLUS

CN 3-Hexanone, 1-(ethylsulfinyl)-5-[(tetrahydro-2H-pyran-2-yl)oxy]- (CA INDEX NAME)



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=> d his full

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L4 0 SEA HCAPLUS

FILE 'CAPLUS' ENTERED AT 09:43:22 ON 16 FEB 2010 L5 1 SEA L3

FILE 'REGISTRY' ENTERED AT 09:43:48 ON 16 FEB 2010

FILE 'CAPLUS' ENTERED AT 09:44:11 ON 16 FEB 2010

FILE 'HCAPLUS, USPATFULL, ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 09:44:17 ON 16 FEB 2010

| L6 | 1 S L3 |
|------|--------|
| L7 | 0 S L3 |
| L*** | 0 S L3 |
| L6 | 1 S L5 |
| L7 | 0 S L5 |
| L*** | 0 S L5 |

FILE 'REGISTRY' ENTERED AT 09:46:10 ON 16 FEB 2010 L6 3 SEA SSS SAM L1

FILE 'HCAPLUS' ENTERED AT 09:46:26 ON 16 FEB 2010 L7 6 SEA L6 D L7 1-6 IBIB ABS HITSTR

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FILE USPATFULL FILE COVERS 1971 TO PATENT PUBLICATION DATE: 11 Feb 2010 (20100211/PD) FILE LAST UPDATED: 11 Feb 2010 (20100211/ED) HIGHEST GRANTED PATENT NUMBER: US7661147 HIGHEST APPLICATION PUBLICATION NUMBER: US20100037360 CA INDEXING IS CURRENT THROUGH 11 Feb 2010 (20100211/UPCA) ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 11 Feb 2010 (20100211/PD) REVISED CLASS FIELDS (/NCL) LAST RELOADED: Dec 2009 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Dec 2009

USPATFULL now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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FILE COVERS 1998 TO 12 Feb 2010 (20100212/ED)

FILE LAST UPDATED: 12 FEB 2010 (20100212/ED)

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FILE ADISINSIGHT

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FILE ADISNEWS

FILE COVERS 1983 TO 16 Feb 2010 (20100216/ED)

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FILE AGRICOLA

FILE COVERS 1970 TO 6 Jan 2010 (20100106/ED)

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scheme. The new classification schemes are available as a PDF file and may be downloaded free-of-charge from: http://www.stn-international.com/cc-de.html and http://www.stn-international.com/cc-en.html<<< FILE CIN FILE COVERS 1974 - 11 FEB 2010 (20100211/ED) VOL 39 ISS 7 FILE CONFSCI FILE COVERS 1973 TO 14 Jan 2010 (20100114/ED) CSA has resumed updates, see NEWS FILE FILE CROPB FILE LAST LOADED: 11 NOV 94 <941111/UP> <<< CROPB IS A STATIC FILE WITH NO UPDATES >>> FILE CROPU FILE LAST UPDATED: 5 JAN 2004 <20040105/UP> FILE COVERS 1985 TO 2003 <<< CROPU IS A STATIC FILE WITH NO UPDATES >>> FILE DDFB >>> FILE COVERS 1964 TO 1982 - CLOSED FILE <<< FILE DGENE FILE LAST UPDATED: 5 FEB 2010 <20100205/UP> DGENE CURRENTLY CONTAINS 26,083,782 BIOSEQUENCES >>> ONLINE THESAURUS AVAILABLE IN /PACO <<< >>> DOWNLOAD THE DGENE WORKSHOP MANUAL: http://www.stn-international.com/dgene_wm.html >>> DOWNLOAD COMPLETE DGENE HELP AS PDF: http://www.stn-international.com/dgene_help.html >>> DOWNLOAD DGENE BLAST/GETSIM FREQUENTLY ASKED QUESTIONS: http://www.stn-international.com/dgenefag.html >>> GETSEQ ENHANCEMENTS: Maximum result set limit increased to 250,000 answers, new HIT (ALIGN) display available. Please see HELP CHANGE for details. To learn more, visit: http://www.stn-international.com/newgetseq.html <<<</pre> >>> Percent Identity sorting is now available <<<

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such as biofuels and biodegradable polymers.

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The MEDLINE file segment has been reload and updated with the National Library of Medicine's revised 2010 MeSH terms.

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